TECHWARE

Engineering Applications, Inc.

Your Guide to Installing and Getting Started with @Gas
Version 3.2

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Welcome to @Gas 3.2 from
Techware Engineering Applications, Inc.

@Gas Version 3.0 provides accurate gas property functions which can be accessed through *DeskTop Gas*, our interactive air property calculator, and can be called by many Windows applications including Microsoft Excel, Lotus 1-2-3, and MathSoft Mathcad. Programmers can call the gas property functions from programming languages such as Visual BASIC, Visual C++ and many databases. The software supports 32-bit versions of most applications and can run under Windows Windows 95, 98, NT, 2000, XP or Vista.

System Requirements

The minimum system requirements needed to use **@Gas** Version 3.2 include:

- Microsoft Windows 95, 98, NT, 2000, XP or Vista.
- All other hardware required by your version of Microsoft Windows.
- Approximately 4 MB of free disk space

Multi-User Licenses

If your **@Gas** license allows more than one concurrent user, then you may repeat the installation on as many computers as indicated on your license. In each installation, you will use the same serial and authorization numbers.

Preparing for Installation

Locate Your Serial and Authorization Numbers
You will find your serial number and authorization number on the license document we sent you with your purchase. You will be asked for these numbers during the installation process. These are your unique numbers. Be sure to store them in a safe and secure place.

If someone else wishes to try **@Gas** on his computer, **do not** give him your numbers. You are responsible for keeping these numbers private. Instruct them to visit our website where they can download a copy for a 30 day evaluation.

If you are installing **@Gas** as a demo you will not need a serial number, however, if you try to install **@Gas** as a demo after the evaluation period has expired, you will be prompted for a demo number. If you require a second evaluation period, call Techware

Log On with Administrator Privileges
If your computer is running Windows NT, 2000, XP or Vista, you must be logged in with Administrator privileges for a complete installation.

Install Other Applications before @Gas
If you wish to use **@Gas** with Excel, 1-2-3 or Mathcad, make sure these applications are installed before installing **@Gas**. The Setup program will copy add-in files to specific directories of these applications so that they can find the **@Gas** add-ins. If you upgrade any of these applications after installing **@Gas**, you may have to re-install **@Gas** for proper operation.

Step-by-Step Installing

1. Open Windows Explorer, and find the **@Gas** file that you downloaded from our website. Double click the file "@Gas.exe" to begin the installation.

2. In the **Welcome** dialog box, press *'Next'*

3. In the **Software License Agreement** dialog box, press '*Yes*'.

4. In the **Choose Destination Location** dialog box, press '*Next'* to accept the default location. Press '*Browse*' to select an alternate location then press '*OK*' and '*Next*' to continue.

5. In the **Select Components** dialog box, add-ins for Excel, 1-2-3 and Mathcad should be checked if these applications are installed on your computer. If you wish to use the functions with C++ or Visual Basic, check the "Programming Support" box then press '*Next*' to continue.

6. In the **Select Program Folder** dialog box, press '*Next*' to accept the default folder.

7. In the **Question** dialog box, press 'No' if you are using 16-bit applications that need the **@Gas** functions or 'Yes' if not.

8. In the **Product License Verification** dialog box, press the "Enter License Numbers" button if you have your Serial and Authorization numbers; enter them then press '*OK*' and then *'Done'*. If you are installing WinSteam as a demo, press the 'Demo' button. You should receive a notice that you have 30 days to evaluate the software.

9. Enter your Serial and Authorization numbers, then press '*OK*' and then *'Done'*.

10. Press *'Finish'* to complete the installation.

Getting Started

Using the DeskTop Gas Calculator

DeskTop Gas is a Windows program that calculates the thermodynamic and transport properties of moist air. It calculates all unknown properties when a state point is defined by two known properties. *DeskTop Gas* allows you to label and store a collection of state points, which can be printed in a table or copied to the clipboard and pasted into other Windows applications.

You can launch *DeskTop Gas* by clicking the Windows '*Start*' button then go to '*All Programs'*, '*TechwareEng*' folder, '*Gas*' folder and click "DeskTop Gas".

Once you have started *DeskTop Gas*, you can get specific instructions for using it from the Help Menu. We suggest that you start by clicking "DeskTop Gas Topics" on the Help 'Contents' tab and review the topics in order.

You can find operating instructions for *DeskTop Gas* in Chapter 3 of the User's Manual as well.

Using the @Gas Functions from Excel

The **@Gas** add-in for Excel is launched from within Excel. Once you have started Excel, use the Tools, Add-ins menu to start Excel's Add-In Manager. (In Office 2007, click the Office button, then click the "Excel Options" button, then select the Add-ins tab and click the "Go…" button at the bottom.) You should see an item, "@Gas for Excel" in the list box. Click the check box next to "@Gas for Excel" and press '*OK*'. The **@Gas** copyright notice should be displayed on the status bar at the bottom of Excel. The **@Gas** add-in is now loaded into Excel and will reload every time you start Excel. If you do not want the Add-in to load each time you start Excel, go back to the Add-in Manager and uncheck the @Gas box before closing Excel.

If you did not find "@Gas for Excel" in the Add-in Manager list box, click the '*Browse*' button and look for the file xlgas32.xll. When you find it, click OK. "@Gas for Excel" should now appear in the list box.

Once the add-in is loaded, you can use the gas property functions in the same way as you would use Excel's built-in functions. That is, you can type the function in a cell formula or use the Insert Function menu to guide you.

If you use the Insert Function menu, select the "Engineering" category and choose one of the functions beginning with "Gas". If you have other Techware add-ins installed, you will see those functions as well. As you click on a function, you will see its description below the list box. When you find the function that you want, click 'OK' and the next dialog box will guide you through the selection of each function argument.

You can find more detailed information by clicking "@Gas" on Excel's Help menu or in the **@Gas** User's manual.

Using the @Gas Functions from 1-2-3

The **@Gas** add-in for 1-2-3 is launched from within 1-2-3. Once you have started 1-2-3, use the File, Add-Ins, Manage Add-ins menu selections to start the Add-In manager. Before you can use the **@Gas** add-in for the first time, you must register it by pressing the 'Register' button. You should see the file 123gas.12A in the Register Add-Ins window. If you installed the file elsewhere, you will have to use the 'Look in' window to search for the file. When you have located the 123gas.12A file, select it and press 'Open'. The add-in is now registered.

To load the add-in after it is registered, click on the path name that has the 123gas.12A file. A check mark will appear to the left of the path name indicating that the add-in is selected. Press 'Done' to complete the task.

Thereafter, each time you start 1-2-3, the functions will be loaded automatically. If you wish to unload the functions, use the Add-In manager and uncheck the add-in.

Once the add-in is loaded, the air property functions can be used in any cell formula by typing the function name in the same ways as 1-2-3's built-in functions.

You can find more detailed information by clicking "@Gas Help" on 1-2-3's Help menu or in the **@Gas** User's manual.

Using the @Gas Functions from Mathcad

The **@Gas** add-in for Mathcad is a self-registering dynamic link library (DLL) named Mcdgas32.dll. The setup program should have installed this file in the Mathcadx\userefi directory. Whenever an **@Gas** function is used, Mathcad will automatically load and register the function.

You can use the gas property functions by typing the function with its arguments or by using the Insert Function menu.

If you use the Insert Function menu, select the "Engineering" category and choose one of the functions beginning with "Gas". If you have other Techware add-ins installed, you will see those functions as well. As you click on a function, you will see its description in the box below the list. When you find the function that you want, click 'OK' and the function will be inserted in your worksheet with spaces for the arguments.

You can find more detailed information in the **@Gas** User's manual.

Getting Help when operating with Windows Vista

All Techware products use Microsoft's WinHlp32.exe program for displaying help. This program is not included with the Vista operating system but can be downloaded from Microsoft for free. Go to www.microsoft.com/downloads and search for "WinHlp32.exe". You will find a title "WinHlp32.exe for Windows Vista". Download and install this program and help will be available. In Office 2007, the help files cannot be launched from within Excel. Go to the Start Menu in the TechwareEng group and you will find a shortcut to the help files.